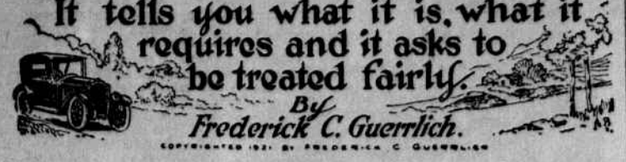
The Automobile Speaks

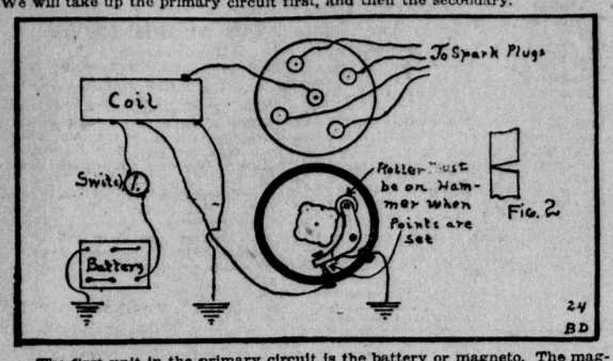


No. 24.

Trouble Locating.

Ignition Trouble.

A large proporton of engine trouble is due to the ignition system, but, to the man who knows the theory of the system on his car the location of trouble here is comparatively easy. Let us see where trouble might develop. We will take up the primary circuit first, and then the secondary.



The first unit in the primary circuit is the battery or magneto. The magneto we will study separately, so let us now take up the battery. The battery may be discharged. If it be a dry battery we can determine this by the use of a volt-ammeter. The battery should not give a reading of less than 10 amperes (never buy a cell giving less than 20). The only remedy for a discharged dry cell is to replace it. To tell if a storage battery be discharged a hydrometer is used. If the reading is less than 1,200 the battery needs recharging. The battery may be fully charged, but the connecting links between the cells loose or dirty, in which case no current would issue therefrom. The battery may be out of order, which means a job for the battery expert.

Next to the battery comes the switch. This is often a source of trouble, as the movable contact arm may have become soft and bent and so not be making a contact.

After the switch comes the coil. This seldom gives trouble, unless it be abused. With many systems, if the switch be left on while the engine is not running, the coil will heat up, and the insulation, which often is only waxed paper or silk, will melt and thus ruin the coil. Coil trouble should only be taken to an expert on this kind of work.

The next unit after the coil is the interrupter. Water or oil may have gotten into it and thus caused it to be short circuited. The remedy is to wipe it dry and thoroughly clean. The interrupter points may not open or may not make contact. This can be seen by having some one slowly turn over the engine while you watch them. When the roller of the interrupter is against the hammer, or high spot of the cam, the points should be open about 1-50th of an inch, or about the thickness of a visiting card. The illustration shows the position of the cam when the points are open. When off the hammers of the cam the points must make contact.

In time the interrupter points may become burned, or pitted as it is termed. This will offer a resistance to the current and thus cause a weakening of the secondary. This may be sufficient to cause a failure of the spark. To remedy get a double faced, thin finger nail file and insert it between the two points and so file them both at once. If filed separately you may get them as shown in Figure 2, which, if anything, will be worse than the pitted points.

The wires are the cause of more ignition trouble than are the units in the system. They may become loose, broken or short circuited. The short circuit may be due to the wire becoming oil or water soaked, to the insulation being worn off at spots, and, sometimes, to the fact that the terminals between the binding posts and the insulation have come in contact with the metal of the engine.

Short Circuit.

Let me tell you what is meant by a *short circuit*. Suppose a doctor ordered you to walk around a park for exercise, and suppose that instead of going all the way around you took a path through the park and thus got home sooner. You would have taken a short cut, or short circuit, and thus not have done the work you were ordered to do. In the same way, if you try to send a current of electricity through a wire, a switch, a coil, an interrupter and then home, instead of the current going through these units, somewhere, because of a bare wire, &c., it gets back to the battery before it has, it will have taken a short cut or short circuit. The remedy for the short circuit is to wrap the bared wire in insulating tape or to replace the wire.

Let us see where the secondary may give trouble. Like the primary, the coil may have been burned out, and the wires have become loose or short circuited. Here, however, the loose wire, because of the great voltage, is not so liable to cause trouble as it is in the primary; the danger of a short circuit is increased, though.

The distributor is the next unit in this circuit. Water or oil may cause a short circuit here, as in the interrupter, cleaning being the remedy.

After the distributor come the spark plugs, and they are very often the cause of missing, though seldom of the stopping or failure to start of the engine. These are liable to be short circuited by oil, by carbon or by the breaking of the porcelain insulation. Cleaning will remedy the first two, while if the porcelain is broken it can be replaced. It would often be advisable, however, to replace the entire plug. The points of the plug may be too far apart or not far enough apart. With the magneto and distributor they should be about 1-50th of an inch apart, but with the vibrator coil they may be as far as 1-32d of an inch apart.

CAR'S RECORD RUN ATTRACTS ATTENTION

Detroit-New York Drive of C. H. Wills Interests Motorists.

So far as is known no automobile has ever equalled the record of the Wills Sainte Claire car in covering the distance between Detroit and New York in twenty hours and twenty-six minutes, a feat accomplished on August 17.

This remarkable exhibition of speed, stamina and roadability has naturally attracted country wide attention to the new car manufactured at Marysville, Mich., and which is the realization of the long cherished ideal of its designer and maker, C. Harold Wills. But while the performance of the car has stirred motordom, its Detroit-New York run has also served to turn the spotlight on Mr. Wills, for it was he who drove the car.

Mr. Wills, although intimately identified with the motor car industry since its early beginnings, is not and never has been a professional driver or stunt performer. He is a distinguished automotive engineer, metallurgist, inventor and industrial innovator of international reputation. The role he played August 17, when he drove the car he created in a record breaking cross country flight over indifferent roads and a route he had never before covered, is one with which he had not previously been identified and is one also he is not likely to play frequently.

Mr. Wills began his career as an expert machinist, tool designer and draughtsman. When the automobile was about ready to be born he was occupying an important position in a great adding machine concern. He was induced to join forces with a small organization which was about to manufacture one of the earliest practical and successful automobiles. Long before he left this company to form his own it had become the largest in the world and Mr. Wills himself had become, next to the founder, the greatest factor in its success and growth.

There are five major achievements credited to C. Harold Wills, any one of which would be sufficient glory for one man. He is credited with doing more than any other in the development and application of volume production to modern industry. His accomplishments in the invention and development of precision economies and labor-saving devices have been most noteworthy and made possible the huge daily production and sale of the cars with which he was for so long identified.

A pioneer in the application of the science of metallurgy to the motor car he developed vanadium steel to meet the demand for a metal that would resist vibration and withstand the terrific shocks and strains to which an automobile is subjected. Vanadium steel made possible the modern motor car.

His fourth great accomplishment was another achievement in metallurgy. To meet the demands of his own engineering ideals, which were later to be realized in the Wills Sainte Claire car, a still greater advance was necessary in the science of steel alloys and Mr. Wills finally developed mo-lyb-de-num, a new super-steel which combines strength and resistance to vibration to a degree hitherto unapproached. All the parts in the Wills Sainte Claire car that suffer stress and strain are made of mo-lyb-de-num steel.

Mr. Wills's fifth and greatest achievement is the Wills Sainte Claire car built in Marysville, the model industrial city which he created as an important feature of the ideal he sought to express.

The car Mr. Wills drove, an ordinary stock model out of the showroom, is now being used as a demonstrator, for it reached New York in perfect condition and was pressed into service the day it arrived.

Facts About Sixth Annual Labor Day Race, Uniontown Speedway

Date—Monday, September 5.
Place—Uniontown, Pa.
Gates open—8 A. M. Eastern standard time.
Race starts—2 P. M. Eastern standard time.
Distance of race—225 miles—200 laps of the Speedway.
Purse and bonuses—$40,000.
Race is under sanction and rules of A. A. A., and is national championship award event. Open to cars of 183 inch and under displacement.
Referee—Frank Rosboro.
Honorary referee—Louis Chevrolet.
Pacemaker first lap—Barney Oldfield.
Starter—Neil Whalen of New York.
Price—General admission, $2.50, including war tax. Reserved box and grandstand seats extra.

ENTRIES.

Eddie Hearne	Disteel Flyer
Tommy Milton	Frontenac
Jimmy Murphy (Grand Prix winning car)	Duesenberg
Jules Ellingboe	Frontenac
Roscoe Sarles	Duesenberg
Bennie Hill	Frontenac
Joe Thomas	Duesenberg
Howard Wilcox	Frontenac
"Red" Fetterman	Duesenberg
Alton Soules	Frontenac
Eddie Miller	Duesenberg

PACKARD OFFICIAL SEES IMPROVED CONDITIONS

"There is no gainsaying the fact that the automobile situation to-day is immeasurably better than it has been during recent months, and that the improvement is firm and steady," says Lee J. Eastman, president of the Packard Motor Car Company of New York.

"Several companies that were completely shut down are now on part time while others that were working only part time three months ago are working full time to-day. Factories are charged once more with the responsibility of production. Employment lines are dwindling and many have disappeared altogether. Best of all, retail display rooms are again the centres of lively business. No matter from what angle the situation is considered, it presents sure signs of recovery.

"Figures which have been furnished by the Packard Motor Car Company of Detroit indicate clearly the trend and force of the improvement. In the Chicago territory, for example, July Twin-Six sales equalled those of the previous three months combined. Detroit retail sales for July totalled a quarter million dollars. And generally speaking this showing is representative of the other 325 Packard distributing points throughout the country."

SIMMONS COLLEGE GIRLS TOUR IN MOTOR TRUCK

Seven Simmons College girls are cruising the country this summer on a unique venture. When they complete their vacation tour of the East they hope the $2,000,000 endowment fund which their alma mater is out to raise will be richer by virtue of their efforts and enterprise.

Having mapped out an itinerary designed to take them daily to new places where people congregate—to summer resorts, carnivals and fairs—the "jolly seven" chartered a two ton White truck at Boston and embarked.

From the well stocked White the Simmons seven are selling creations of their own skill and originality—and a conglomerate stock it is. A partial inventory would reveal confections and cloth hats, silver and furniture polish made at the college, soap, woolen and knit goods, not to mention the famous Sally Simmons dolls. Orders are also being taken for the prize gingham dress designed by a Simmons student.

LABOR DAY TRIP TO ATLANTIC CITY

Shore Route Now Open and Bad Detour Avoided.

The run to Atlantic City, always much enjoyed by motorists, has been made more pleasant in the last few days by the opening of the shore route. Road construction, under way for several months, necessitating the use of a poor road between Matawan and Morgan, is now finished and the favorite coast is now open all the way down. The Automobile Club of America, Bureau of Tours, for this reason gives the Jersey coast and Atlantic City as its suggestion for this week's trip.

In leaving New York, either the Staten Island or the Newark route may be used. Brooklyn motorists will probably find Staten Island the better, in view of the direct connection furnished by the Sixty-fifth street, Brooklyn, ferry to St. George.

For the Staten Island route take the municipal ferry from the Battery to St. George. From ferry bear left up hill, turning left at Borough Hall and go through New Dorp, Great Kills, Seaside, Tottenville and by ferry to Perth Amboy and on to South Amboy.

The Newark route leaves Manhattan by the Forty-second street ferry, to Weehawken and continues along the Hudson County Boulevard to Newark and on through Elizabeth, Rahway, Woodbridge and Perth Amboy to South Amboy.

Both routes coincide from this point and on through Elizabeth, Rahway, Matawan, Freneau, Wickatunk, Marlboro, Freehold and Adelphia to Lakewood, sixty-five miles from New York via Newark, but about fifteen miles shorter through Staten Island.

After leaving Lakewood the route passes through a number of small towns located on Barnegat Bay, famous for its shooting and fishing in season. Toms River, Bayville, Lanoka, Forked River, Waretown, Barnegat, Manahawken, Cedar Run, Staffordville, West Creek, follow each other closely. Then Tuckerton, famous in war times for its more or less authentic news despatches received by wireless from the other side.

New Gretna is next, Port Republic, Smithville, Oceanville, North Absecon, Pleasantville and over the Atlantic City Boulevard to our destination, sixty-nine miles from Lakewood.

MOST POPULAR WOMAN DRIVER WILL GET CAR

"It is our idea that the most popular woman driver in New York ought to own a beautiful car, and we intend to see that she does," said F. L. Sanford, Dort branch manager, yesterday.

Mr. Sanford proposes to leave the decision as to who the most popular woman driver may be to the New York public, which will be privileged to ballot on the subject for four weeks, beginning Monday, September 12.

The candidate receiving the greatest number of votes, each of which must be signed and delivered personally at the Dort store, will receive one of the new Dort coupes. A committee of citizens will act as judges and every possible safeguard will be placed around the balloting.

Mr. Sanford states that individuals or organizations desiring to enter and work for a candidate may obtain a supply of ballots at once.

The beginning of this interesting contest will be one of the features of the Dort autumn opening, to be held during the entire week of September 12.

Radiator Cleaner.

A very good compound for cleaning the radiator is made as follows: Dissolve as much concentrated lye as a quart of water will hold. Drain a little water out of the radiator and pour in the lye solution. Run the engine for fifteen minutes. Drain the lye solution out and flush the water system out half a dozen times, or until all traces of the lye are removed.

Sedan ...

To obviate dust and dirt getting in the sedan or similar closed cars during warm weather, it is a good plan to fit a screen of fine mesh wire, commonly used in Pullmans, over the lower half of the window.

AUTO DEALERS LAY PLANS FOR OUTING

Date Selected—September 13 —Shows Their Optimism.

Preparations under way for the outing of the Automobile Dealers' Association, which is to be held at Fred J. Wagner's farm, Smithtown, L. I., September 13, indicate that this outing of motor car men and their friends will be the greatest of its kind ever held. Truly it will be a boosters' outing in every sense of the word, as boosting the industry on the part of dealers, salesmen and service men will be the keynote of the outing.

Greater significance than ever is attached to the boosters' outing this year. At a meeting of a number of the dealers on Broadway it was the concensus of opinion that at no tme in business was there so much need for the breaking down of prevailing pessimism and the establishing of a spirit of progressive cooperation. It was therefore decided to make this annual outing of commercial interests greater in scope than ever before.

The boosters' organization is an offspring of the Automobile Dealers' Association. The hosts this year are Walter A. Woods, the president of the organization; W. O. Crabtree and Harry Stratton, vice-presidents; Albert Hirst, secretary-treasurer; Lee J. Eastman, Frank Carrie, I. C. Jones, George S. Morrow, Glenn Tisdale and E. B. Jackson.

George S. Morrow, one of the well known merchants along Automobile Row, is chief engineer of the outing. James (Jimmy) Nichols has been assigned to the post of collector of the "Port." Harry W. Gaston, William Allen, George Brock, Joseph Hall and Percy W. Barton are the committee at large. "Supreme Court Judge of the Day" is one of the popular merchants of Broadway, William Parkinson. Dudley Seguin, who has spent most of his commercial career in the automobile industry, assumes the title of "Commissioner of Police." Harry Fyke, probably one of the best known men on Automobile Row, is the master of transportation, and all are to be grand marshalled by Otto Braunwarth on September 13, when the cavalcade will move, with all its enthusiasm and confidence of the readjustment and reestablishment of our commercial affairs on a sound, intelligent and remunerative basis, to Fred Wagner's farm at Smithtown, who becomes boss of the party on their arrival.

Other members of the committee are J. S. Bestar, provost marshall; Joseph Stern, mess sergeant; Charles Dieges, athletics; Sam Marks, pursuivant; Edward Korbel, scribe; A. C. Harrington, sergeant at arms; E. R. Hunnewell, Excise Commissioner; Gene Sullivan, master of hounds, and Fred Phillips. Court of Appeals—George S. McCutcheon, Joseph Grondahl, Sam Toback, Jack Clark, Frank White and A. E. Randall. Mrs. Fred Wagner will be hostess to the several hundred boosters.

TRANSFORMER CO. OPENS N. Y. HEADQUARTERS

The New York motoring public will be interested in the fact that the Van Kerr Company's oxygen burning system of ignition as applied by the use of Van Kerr transformers, can now be secured from many dealers in the metropolitan territory.

The Van Kerr transformer, a patented, fireproof, oxygen burning system of ignition, for trucks, cycles, pleasure cars, tractors or any motor using spark plugs, can be applied to any make of car. They come in sets for four, six, eight and twelve cylinder cars, and retail at $2 for a set for four cylinder cars; $2.50 for six cylinder; $3.50 for eight cylinder, and $5 for twelve cylinder.

It is claimed for the transformer that there is a saving of gasolene consumption, giving at least two miles more per gallon of gasolene on any make of car. By the keeping of all cylinders firing properly it is claimed that the transformer eliminates carbon. As the contention has often been advanced that nine-tenths of all motor troubles, even to rear axle troubles, are caused indirectly by cylinders pumping oil, fouling the spark plugs, causing one or more cylinders to miss fire, giving an uneven, jerky running motor, and as it is claimed for the transformer that it eliminates all these troubles, the tendency would be to reduce the upkeep by cutting the repair bills. The transformers can be installed by any one in two minutes' time, with the aid of a pair of pliers.

New York distribution headquarters of the Van Kerr Company have been opened at 5 Columbus Circle. B. A. Ecker, director of sales, announces that, although they have been in New York less than three weeks, already more than 150 dealers have signed up for the distribution of their product. This product, by the way, has been successfully used in Chicago, the home of the parent company, for a number of years, more than 50,000 satisfied users in that city alone attesting the merits of the product.

Wheel Bearing Adjustments.

The wheels of the car should be jacked up once a month and tested for smoothness of operation and for side play. If a sharp click is heard when spinning the front wheel, or if its motion is momentarily checked, it is possible that one of the balls or rollers is broken or split. In this case the pieces should be removed at once and a new bearing substituted. In the case of ball bearings, regrinding may be resorted to.